

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

CLAIMS

1. A ready-to-use water dispersible pigment composition comprising a dispersion of a water-insoluble hydrophilic natural pigment in the form of bodies of an average size
5 which is at the most 10 μ m, said bodies being dispersed in the absence of a surface active substance in an aqueous phase comprising a hydrocolloid, the composition containing at least 5% by weight of water.
2. A ready-to-use water dispersible pigment composition com-
10 prising a dispersion of a water-insoluble, hydrophilic natural pigment in the form of bodies of an average size which is at the most 10 μ m, said bodies being dispersed in the absence of a surface active substance in an aqueous phase comprising a hydrocolloid, the composition containing less
15 than 5% by weight of water, subject to the limitation that when the pigment is carmine or spray dried norbixin the hydrocolloid is not gelatin.
3. A composition according to claim 1 or 2 wherein the natu-
20 ral pigment is selected from the group consisting of a porphyrin pigment, carmine, curcumin and a carotenoid.
4. A composition according to claim 3 wherein the pigment is in the form of particles obtained by precipitation of the pigment caused by acidifying an alkaline solution of the pigment.
- 25 5. A composition according to any of claims 1-4 wherein the aqueous phase comprises a carbohydrate.
6. A composition according to claim 1 or 2 wherein the hydro-
colloid is selected from a protein, a polysaccharide and a
30 gum.

7. Use of a composition according to any of claims 1-7 in the manufacturing of an edible product whereby the composition is dispersed in an aqueous phase of said edible food product.

5 8. Use according to claim 8 wherein the aqueous phase has a pH which is at the most 7.

9. Use according to claim 7 in the manufacturing of an edible product comprising multiple, separated compartments whereby the composition is dispersed in one or more selected compartments, the composition in one compartment essentially not
10 migrating to other compartments.

10. Use of a composition according to any of claims 1-6 in the manufacturing of a pharmaceutical product.

11. Use according to claim 10 wherein the pharmaceutical product comprises multiple, separated compartments whereby
15 the composition is dispersed in one or more selected compartments, the composition in one compartment essentially not migrating to other compartments.

12. An edible product comprising a composition according to any of claims 1-6.

20 13. A pharmaceutical product comprising a composition according to any of claims 1-6.

14. A method of preparing a ready-to-use water dispersible pigment composition, said method comprising preparing a dispersion of a water-insoluble, hydrophilic natural pigment
25 by mixing the pigment in the absence of a surface active substance into an aqueous phase containing a hydrocolloid, to obtain a dispersion comprising the pigment in the form of bodies having an average size of at the most 10 μm , the composition containing at least 5% by weight of water.

15. A method according to claim 14, which comprises the further step of drying the dispersion to obtain a composition containing less than 5% by weight of water, subject to the limitation that, when the pigment is carmine or spray-dried norbixin, the hydrocolloid is not gelatin.

16. A method according to claim 14 or 15 wherein the solid pigment is in the form of particles obtained by precipitation of the pigment caused by acidifying an alkaline solution of the pigment.

17. A method according to claim 14 wherein the amount of hydrocolloid is less than 10% by weight calculated on the pigment.

18. A method according to claim 14 which comprises a further step wherein an additional amount of hydrocolloid is added.

19. A method according to claim 14 wherein a carbohydrate is added to the aqueous phase.

20. A method of preparing a ready-to-use water dispersible pigment composition, said method comprising the steps of:

i) preparing an alkaline aqueous solution comprising a water-insoluble, hydrophilic natural pigment,

ii) preparing an aqueous dispersion or solution of a hydrocolloid,

iii) mixing the alkaline aqueous solution with the aqueous dispersion or solution of a hydrocolloid and

iv) if desired, adjusting the pH to a level which causes the pigment to precipitate,

to obtain the composition comprising the pigment in the form of a dispersion of pigment bodies having an average size of

at the most 10 μm , the composition containing at least 5% by weight of water.

21. A method according to claim 20, which comprises the further step of drying the composition of pigment bodies to
5 obtain a composition containing less than 5% by weight of water, subject to the limitation that, when the pigment is carmine or spray-dried norbixin, the hydrocolloid is not gelatin.

22. A method of preparing a ready-to-use water dispersible
10 pigment composition, said method comprising the steps of:

i) preparing an alkaline aqueous solution comprising a water-insoluble, hydrophilic natural pigment followed by decreasing the pH to a level which causes the pigment to precipitate, resulting in a dispersion of precipitated
15 pigment,

ii) preparing an aqueous dispersion or solution of a hydrocolloid,

iii) mixing the dispersion comprising the precipitated pigment of step i) and the dispersion or solution of the hydrocolloid of step ii),
20

to obtain the composition comprising the pigment in the form of dispersions of pigment bodies having an average size of at the most 10 μm , the composition containing at least 5% by weight of water.

23. A method according to claim 22, which comprises the further step of drying the composition of pigment bodies to
25 obtain a composition containing less than 5% by weight of water, subject to the limitation that, when the pigment is carmine or spray-dried norbixin, the hydrocolloid is not
30 gelatin.

24. A method according to of claim 20 wherein the aqueous solution of step i) and/or the dispersion or solution of step ii) comprises a carbohydrate.

5 25. A method according to claim 22 wherein the dispersion comprising the precipitated pigment of step i) and the dispersion or solution of the hydrocolloid of step ii) comprises a carbohydrate.